| 1 | FV00 FV01 FV00 FV01 FV00 FV00 FV00 FV00 | | | | | | | | | | | |
|-------------|--|----------|----------|---------------------|--|---------------------|---------------------|---------------------|---------------------|--------------|--|--|
| | ACTIVITY | WHO | STATUS | FY 03 10/02-9/03 | FY 04 10/03-9/04 | FY 05 10/04-9/05 | FY 06 10/05-9/06 | FY 07 10/06-9/07 | FY 08 10/07-9/08 | OUT YEARS | | |
| l. | PROVIDE AND PROTECT INSTREAM FLOWS (HABITAT MANAGEMENT) | | | | | | | | | | | |
| I.A. | Evaluate methods for defining habitat-flow needs and select methods most appropriate to specific stream reaches. | | | | | | | | | | | |
| I.A.1. | Review instream flow methodologies and assess the technical adequacy of current flow recommendations. | PD | Complete | | | | | | | | | |
| I.A.2. | Develop recommendations for integrating geomorphology and food web studies into Recovery Program. | PD | Complete | | | | | | | | | |
| I.A.3. | Evaluate CDOW's instream flow methodologies and flow recommendations for warmwater native fishes as they relate to flows needed for endangered fish recovery. | FWS | | Х | Х | Х | | | | | | |
| I.A.4. | Develop strategic plan for geomorphic research and monitoring. | Program | | Х | | | | | | | | |
| I.A.4.a. | Conduct needed geomorphic research and monitoring. | Program | | | Х | Х | Х | Х | Х | Х | | |
| I.B. | Develop and select methods for modifiable protection of instream flows in Colorado. | | | | | | | | | | | |
| I.B.1. | Develop, evaluate and select, as appropriate, options for interim protection of instream flows until uncertainty concerning habitat needs and water availability can be resolved. | | | | | | | | | | | |
| I.B.1.a. | Colorado Attorney General review. | СО | Complete | | | | | | | | | |
| I.B.1.b. | CWCB approval/recommended action. | CWCB | Complete | | | | | | | | | |
| I.B.1.c. | Adopt legislation or regulation, if necessary. (CWCB adopted the Statement of Policy and Procedure Regarding the Appropriation of Instream Flows for the Recovery of Endangered Fishes of the Upper Colorado River Basin on March 9, 1994 and S.B. 96- 064 concerning instream flow appropriations of the CWCB was passed in May '96.) | CWCB | Complete | | | | | | | | | |
| I.B.2. | Evaluate options for allocating Colorado's compact entitlement among the five subbasins, the implications for water available to recover the endangered fishes, and implications of full protection of recovery flow recommendations on development of Colorado;s compact entitlement. | CWCB | Complete | | | | | | | | | |
| I.B.3. | Assess need for retirement of senior conditional water rights. | CWCB/FWS | On hold | | | | | | | | | |
| I.C. | Develop an enforcement agreement between the Service and appropriate State agencies to protect instream flows acquired under the Recovery Program for the endangered fishes. | | | | | | | | | | | |
| * I.C.1. | Colorado. | FWS/CWCB | Complete | | | | | | | | | |
| I.D. | Develop tributary management plans (based in part on the tributary report, see V.F., pg. 23). | | | | | | | | | | | |
| I.D.1. | Assess need for tributary management plans on a site specific basis. | PD | | Х | | | | | | | | |
| I.D.1.a. | Estimate future water demands on tributaries. | TBD | | | Х | | | | | | | |
| I.D.1.b. | Develop tributary management plans. | PD | | | Х | Х | | | | | | |
| I.D.1.c. | Conduct appropriate Section 7 and NEPA compliance to implement tributary management plans. | PD/FWS | | | Х | Х | | | | | | |
| II. | RESTORE HABITAT (HABITAT DEVELOPMENT AND MAINTENANCE) | | | | | | | | | | | |
| II.A. | Restore flooded bottomland habitats. | | | | | | | | | | | |
| II.A.1. | Conduct inventory of flooded bottomland habitat for potential restoration. | FWS-FR | Complete | | | | | | | | | |
| II.A.2. | Screen high-priority sites for potential restoration/acquisition. | PD | | X | | | | | | | | |
| II.A.3. | Conduct NEPA for floodplain restoration program. | BR | | Х | | | | | | | | |
| II.B. | Support actions to reduce or eliminate contaminant impacts. [NOTE: Contaminants remediation (in all reaches) will be conducted independently of and funded outside of the Recovery Program] | | | | | | | | | | | |
| II.B.1. | Evaluate effects of selenium. | FWS-ES | Ongoing | Х | Х | Х | | | | | | |
| II.B.1.a. | If needed for recovery, identify actions to reduce deleterious levels of selenium contamination. | FWS-ES | Ongoing | Х | Х | Х | | | | | | |
| II.B.2. | Identify locations of petroleum-product pipelines and assess need for emergency shut-off valves. | FWS-ES | Ongoing | Х | Х | Х | | | | | | |
| | | | | | | l | | V | V | Х | | |
| * II.B.2.a. | Ensure that all new petroleum product pipelines have emergency shutoff valves. | | | | | | X | X | X | ^ | | |

| | | | 1 | | | | | - I | | | - |
|----|---------------|--|-------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|
| | | ACTIVITY | WHO | STATUS | FY 03 10/02-9/03 | FY 04 10/03-9/04 | FY 05 10/04-9/05 | FY 06 10/05-9/06 | FY 07 10/06-9/07 | FY 08 10/07-9/08 | OUT YEARS |
| | II.C. | Develop an issue paper on the desirability and practicality of restoring and protecting certain portions of the floodplain for endangered fishes and evaluate the floodplain restoration program. | | | | | | | | | |
| | II.C.1. | Identify what restoration and protection are needed by addressing: 1) biological merits of restoring the floodplain with emphasis on endangered fish recovery; 2) priority geographic areas; and 3) integration of a broader floodplain restoration initiative into the current Recovery Program floodplain restoration program. | PROGRAM | Phase 1 complete; synthesis rpt. in draft | х | | | | | | |
| | II.C.2. | Identify how to conduct restoration and protection by addressing: 1) restoration and protection tools/approaches; 2) institutional options for floodplain restoration; 3) costs/funding strategy; and 4) implementation steps and schedule. | PD/CO/UT | Phase 2 final draft complete; synthesis rpt. in draft | X | | | | | | |
| | II.C.3. | Identify viable options and develop specific restoration strategies for selected geographic areas (e.g., Grand Valley, Ashley Valley). | PD | Phase 2 final draft complete; synthesis rpt. in draft | х | | | | | | |
| | III. | REDUCE NEGATIVE IMPACTS OF NONNATIVE FISHES AND SPORTFISH MANAGEMENT ACTIVITIES (NONNATIVE AND SPORTFISH MANAGEMENT) | | | | | | | | | |
| | III.A. | Reduce negative interactions between nonnative and endangered fishes. | | | | | | | | | |
| | III.A.1. | Where not already generally known, identify negative impacts (e.g., predation, competition, hybridization) of problem species. | | | | | | | | | |
| | III.A.1.a. | Determine role of nonnative fishes as potential competitors with bonytails and determine size-specific vulnerability of bonytails to nonnative fish predators. | UDWR | Complete | | | | | | | |
| | III.A.1.b. | Assess impact of northern pike predation on Colorado pikeminnow in the Green River. | UDWR | Complete | | | | | | | |
| | III.A.1.c. | Re-evaluate levels of hybridization with white sucker and assess effects on razorback sucker populations. | FWS/STATES | | | | Х | Х | Х | Х | Х |
| >* | III.A.1.c.(1) | If necessary, implement actions to minimize hybridization between white sucker and razorback sucker. | FWS/STATES | | | | | Х | Х | Х | Х |
| | III.A.2. | Identify and implement viable active control measures. | | | | | | | | | |
| | III.A.2.a. | Identify options (including selective removal) to reduce negative impacts of problem species and assess regulations and options (including harvest) to reduce negative impacts on native fishes from nonnative sportfish. | PD | Complete | | | | | | | |
| | III.A.2.b. | Review options and develop agreement with appropriate States on strategies and locations for implementing control options. | FWS/STATES | Complete | | | | | | | |
| >* | III.A.2.c. | Evaluate the effectiveness and develop and implement an integrated, viable active control program. | PD/FWS/ STATES | Ongoing | Х | х | Х | Х | Х | Х | Х |
| >* | III.A.2.d. | Close river reaches to angling where and when angling mortality is determined to be significant. (See specific river reaches.) | STATES | Ongoing, as needed | Х | Х | Х | Х | Х | Х | Х |
| | III.B. | Reduce negative impacts to endangered fishes from sportfish management activities. | | | | | | | | | |
| | III.B.1. | Implementation Committee approval of Interim Nonnative Fish Stocking Procedures. | PD | Complete | | | | | | | |
| | III.B.2. | Implement Interim Nonnative Fish Stocking Procedures. | 55 | 0 1: | | | | | | | |
| | III.B.2.a. | Develop scope of work for evaluation of Interim Procedures. Evaluate and revise Interim Procedures. | PD PD | Complete | | | | | | | |
| | III.B.2.b. | Finalize revised Nonnative Fish Stocking Procedures. | PD | Complete | | | | | | | |
| | III.B.3. | Complete Biological Opinion/NEPA compliance. | FWS-ES/FR | Complete | | | | | | | |
| | III.B.3.b | Implementation Committee approval of revised Nonnative Fish Stocking Procedures. | PD | Complete | | | | | | | |
| | III.B.3.c. | State wildlife commissions approval, as necessary. | STATES | Complete | | | | | | | |
| | III.B.3.d. | Execute memoranda of agreement between Service and States. | FWS/STATES | Complete | | | | | | | |
| | III.B.4. | Incorporate final Procedures into State aquaculture permitting process. | | | | | | | | | |
| >* | III.B.4.a. | Colorado. | CDA/CDOW | Complete | | | | | | | |
| | III.B.4.a.(1) | Evaluate effectiveness of Colorado's stocking regulation. | CDOW | <u> </u> | Х | | | | | | |

| | | | 1 | EV 02 | FY 04 | EV 05 | FY 06 | EV 07 | FY 08 | OUT |
|------------|--|-------------------|-----------------------------------|---------------------|-------|---------------------|------------|---------------------|------------|------|
| | ACTIVITY | WHO | STATUS | FY 03 10/02-9/03 | | FY 05 10/04-9/05 | 10/05-9/06 | FY 07 10/06-9/07 | 10/07-9/08 | YEAR |
| III.B.4.b. | Utah. | UDWR | Complete | | | | | | | |
| III.B.4.c. | Wyoming. | WYGF | Complete | | | | | | | |
| III.B.5. | Explore options for tribal acceptance of Nonnative Fish Stocking Procedures. | FWS-FR | Complete | | | | | | | |
| III.B.6. | Review, evalulate, and revise as needed, the Nonnative Fish Stocking Procedures. | PD/FWS/ STATES | Every 5 years | × | | | | | × | х |
| IV. | MANAGE GENETIC INTEGRITY AND AUGMENT OR RESTORE POPULATIONS (STOCKING ENDANGERED FISHES) | | | | | | | | | |
| IV.A. | Genetics Management. | | | | | | | | | |
| IV.A.1. | Develop and approve Genetics Management Guidelines. | PD | Complete (update as needed) | | | | | | | |
| IV.A.2. | Develop and implement Genetics Management Plan for all species and genetic stocks and update as needed. | PD | Ongoing (updated 6/99) | Х | Х | Х | Х | Х | х | Х |
| IV.A.3. | Conduct genetic stock identification studies (includes Gila taxonomy studies) and confirm presumptive genetic stocks based on all available information. | | | | | | | | | |
| IV.A.3.a. | Razorback sucker. | BR | Complete | | | | | | | |
| IV.A.3.b. | Bonytail and humpback chub. | | | | | | | | | |
| IV.A.3.b.(| | PD | Draft not accepted. Dropped. | | | | | | | |
| IV.A.3.b.(| 2) Mitochondrial DNA analysis. | BR | Draft not accepted. Dropped. | | | | | | | |
| IV.A.3.c. | Colorado pikeminnow. | PD | Complete | | | | | | | |
| IV.A.4. | Secure and manage the following presumptive genetic stocks in refugia (according to the Genetics Management Plan). | | | | | | | | | |
| IV.A.4.a. | Razorback sucker. | | | | | | | | | |
| IV.A.4.a.(| 1) Middle Green (including spawning bar at RM 311.5) | FWS-FR | | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.a.(| 2) Upper Colorado River. | FWS-FR | | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.b. | Bonytail | UDWR | | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.c. | Humpback chub. | - | | | | | | | | |
| IV.A.4.c.(| · | FWS-FR | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.c.(| | UDWR | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.c.(| | | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.c.(| | | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.c.(| | | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| IV.A.4.d. | Colorado pikeminnow. | | | | | | | | | |
| IV.A.4.d.(| Upper Colorado Piver above Westwater Canyon (Broodstock currently represented by | TBD | Ongoing | х | Х | Х | Х | Х | Х | Х |
| IV.B. | Conduct annual fish propagation activities. | | | | | | | | | |
| IV.B.1. | Identify fish needs for genetic stock refugia, research, augmentation, and information and education. | PD | Annual | 12/02 | 12/03 | 12/04 | 12/05 | 12/06 | Х | Х |
| IV.B.2. | Produce Annual Propagation Operational Plan. | PD | Annual | 12/02 | 12/03 | 12/04 | 12/05 | 12/06 | Х | Х |
| IV.B.2. | Conduct NEPA compliance and develop biological opinion on disposal of excess captive- | FWS-ES/FR | Complete | 12/02 | 12/03 | 12/04 | 12/00 | 12/00 | ^ | |
| 11/10 | reared endangered fish. | | | | | | | | | |
| IV.C. | Operate and maintain facilities. | E146 == | Ongoing | | | | | ,, | | |
| IV.C.1. | Ouray. | FWS-FR | | X | X | X | X | X | X | X |
| IV.C.2. | Grand Valley endangered fish facilities. | FWS-FR | | X | Х | Х | X | X | X | X |
| | | | | | | | | | | |
| IV.C.3. | Wahweap. Mumma. | UDWR CDOW | | X | X | X | X | X | X | X |

| | <u> </u> | | | | | | | | | |
|--------------|---|--------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|
| | ACTIVITY | WHO | STATUS | FY 03 10/02-9/03 | FY 04 10/03-9/04 | FY 05 10/04-9/05 | FY 06 10/05-9/06 | FY 07 10/06-9/07 | FY 08 10/07-9/08 | OUT YEAR |
| IV.D.1. | Develop Coordinated Hatchery Facility Plan based on revised State stocking plans. | PD | Complete | | | | | | | |
| IV.D.2. | Design and construct appropriate facilities. | | | | | | | | | |
| IV.D.2.a. | Ouray. | FWS/BR | Complete | | | | | | | |
| IV.D.2.b. | Wahweap. | UDWR/BR | | X | | | | | | |
| IV.D.2.c. | Grand Valley endangered fish facilities. | FWS/BR | Complete | | | | | | | |
| IV.D.2.d. | Acquire ponds for growout of endangered fishes. | | | | | | | | | |
| IV.D.2.d.(1) | 23 acres of growout ponds in the Green River basin. | FWS/STATES | Ongoing | Х | Х | Х | Х | Х | | Х |
| IV.D.2.d.(2) | 100 acres of growout ponds in the Colorado River basin. | FWS/STATES | Complete | | | | | | | |
| IV.E. | Conduct monitoring to evaluate effectiveness and continuation of endangered fish stocking. | | | | | | | | | |
| IV.E.1. | Assess the monitoring needed to evaluate the contribution to recovery of endangered fish | LEL/CTATEC | Camplete | | | | | | | |
| IV.E.I. | stocking over relevant reaches, life stages, and generations. | LFL/STATES | Complete | | | | | | | |
| IV.E.2. | Evaluate endangered fish stocking. | FWS/LFL/ States | | Х | Х | Х | Х | Х | Х | Х |
| IV.E.3 | Modify stocking plans to ensure successful stocking. | Program | | | Х | Х | Х | Х | Х | Х |
| | MONITOR POPULATIONS AND HABITAT AND CONDUCT RESEARCH TO SUPPORT | 3 | | | | | | | | |
| V. | RECOVERY ACTIONS (RESEARCH, MONITORING, AND DATA MANAGEMENT) | | | | | | | | | |
| | Measure and document population and habitat parameters to determine status and biological | | | | | | | | | |
| V.A. | response to recovery actions. | | | | | | | | | |
| | Conduct interagency data management program to compile, manage, and maintain all research | | | | | | | | | |
| V.A.1. | and monitoring data collected by the Recovery Program. | FWS-FR | Annual | Х | Х | Х | Х | Х | X | 2 |
| V.B. | Conduct research to acquire needed life history information. | | | | | | | | | |
| V.B.1. | Identify significant deficiencies in life history information and needed research. | PD | Ongoing | Х | Х | Х | Х | Х | Х | |
| V.B.1. | Conduct appropriate studies to provide needed life history information. | FWS-FR/ | Ongoing | X | X | X | X | X | X |) |
| V D 0 - | Explores and for invalid to a board on winter duction when | STATES | 0 | | | | | | | |
| V.B.2.a. | Evaluate need for imprinting based on reintroduction plans. | FWS-FR | Complete | | | | | | | |
| V.C. | Develop and enhance scientific techniques required to complete recovery actions. | EIMO ED | 0 1 | | | | | | | |
| V.C.1. | Conduct marking study of young-of-the-year Colorado pikeminnow. | FWS-FR | Complete | | | | | | | |
| V.D. | Establish sampling procedures to minimize adverse impacts to endangered fishes. | | _ | | | | | | | |
| V.D.1. | Assess electrofishing injury impacts to endangered fishes. | BR | Complete | | | | | | | |
| V.D.2. | Implement scientific sampling protocols to minimize mortality for all endangered fishes. | FWS-ES/ STATES | Ongoing | X | Х | Х | X | Х | X | , |
| V.E. | Provide for long-term care, cataloging, and accessibility of preserved specimens. | PROGRAM | Ongoing | Х | X | X | Х | X | Х | |
| V.F. | Assess relative biological importance of tributaries and their potential contributions to endangered fish recovery. | Contract | Complete | | | | | | | |
| V 0 | Reevaluate overutilization for commercial, recreational, scientific or educational purposes and | EMC 50 | 0 | ., | | ., | | | | |
| V.G. | identify actions to ensure adequate protection. | FWS-ES | Ongoing | Х | Х | Х | | | | |
| V.H. | Reevaluate effects of disease and parasites and identify actions to ensure adequate protection. | FWS-ES | Ongoing | Х | Х | Х | | | | |
| VI. | INCREASE PUBLIC AWARENESS AND SUPPORT FOR THE ENDANGERED FISHES AND THE RECOVERY PROGRAM. | | | | | | | | | |
| VI.A. | Conduct survey to measure public awareness of and attitudes toward endangered Colorado River fishes and the Recovery Program. | PD | Complete 1995. Update if needed | | | | | | | |
| VI.B. | Train Recovery Program managers and researchers in media relations. | PD | Ongoing | Х | X | Х | Х | Х | Х |) |
| VI.C. | Plan and implement information and education and public involvement activities for all | PROGRAM | Ongoing | X | X | X | X | X | X | |
| | significant Recovery Program actions (e.g presentations, public meetings, public involvement | | | | | | | | | |
| VI.D. | Promote technical publication of study results. | PD | Ongoing | Х | Х | Х | Х | Х | Х |) |
| VI.E. | Produce, distribute, and evaluate information and education products (such as newsletter, brochures, public website, etc); manage media relations, including contacting reporters, producing news releases, fact sheets, etc. | PD | Ongoing | х | Х | Х | Х | х | х | 2 |

| | | | | | | | · | | | |
|---------|--|-------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|
| | ACTIVITY | WHO | STATUS | FY 03 10/02-9/03 | FY 04 10/03-9/04 | FY 05 10/04-9/05 | FY 06 10/05-9/06 | FY 07 10/06-9/07 | FY 08 10/07-9/08 | OUT YEARS |
| VI.F. | Participate in development and circulation of interpretive exhibits about the Recovery Program and the endangered fish. | PD | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| VI.G. | Maintain Recovery Program technical library and library web page. | PD | Ongoing | Х | Х | Х | X | Х | Х | Х |
| VII. | PROVIDE PROGRAM PLANNING AND SUPPORT (PROGRAM MANAGEMENT) | | | | | | | | | |
| VII.A. | Determine actions required for recovery. | | | | | | | | | |
| VII.A.1 | Assure consistency of RIPRAP with currently approved recovery plans. | PD | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| VII.A.2 | Recognize the role of the Upper Colorado River Recovery Program in revised recovery plans. | FWS | Ongoing | Х | Х | Х | Χ | Х | Х | Х |
| VII.A.3 | Update, refine, and prioritize recovery actions (RIPRAP) annually. | PD | Annual | Х | Х | Х | Х | Х | Х | Х |
| VII.A.4 | Develop Interim Management Objectives (IMOs) for each species and presumptive stock and an index to population status. | PD | Complete | | | | | | | |
| VII.A.4 | a. Public and external peer review of IMOs. | FWS | Complete | | | | | | | |
| VII.A.4 | | ALL | Complete | | | | | | | |
| VII.A.5 | Develop specific recovery goals. | | | | | | | | | |
| VII.A.5 | 1 1 | FWS | Complete | | | | | | | |
| VII.A.5 | b. Develop recommended recovery goals. | PD/Contract | Complete | | | | | | | |
| VII.A.5 | c. Biology Committee review of recommended recovery goals. | Program | Complete | | | | | | | |
| VII.A.5 | 0. | FWS/PD | Complete | | | | | | | |
| VII.A.5 | e. Conduct species status review and update recovery goals at least every 5 years. | FWS/Program | Ongoing | | | | | Х | Х | Х |
| VII.A.6 | Identify elements of state conservation plans to ensure long-term management and protection following delisting. | Program | | Х | Х | Х | Х | Х | Х | Х |
| VII.A.7 | Monitor and assess Recovery Program accomplishments annually. | PD | Annual | Х | Х | Х | Χ | Х | Х | Х |
| VII.A.8 | Develop biennial work plan to address priority needs. | PD | Annual | Х | Х | Х | Χ | Х | Х | Х |
| VII.B. | Actively participate in Recovery Program committees and secure funding for annual work plan and larger projects (e.g., water acquisition, capital construction, and long term operation and maintenance) in accordance with the recovery actions and milestones (Utah, Colorado, Wyoming, Bureau of Reclamation, Fish and Wildlife Service, Western Area Power Administration, Water Users, Environmental Groups, Colorado River Energy Distributors Association) and the National Park Service. | PD | Ongoing | х | Х | Х | Х | Х | Х | Х |
| VII.B.1 | base funding after 2011 that may be required to fulfill the goals of the Recovery Programs. Report is due to the committees of the U.S. Senate and House of Representatives 9/30/08. | Program | | | | | | | х | |
| VII.C. | Manage, direct, and coordinate Recovery Program activities. | PD | Ongoing | Х | Х | Х | Х | Х | Х | Х |
| VII.C.1 | Review Information and Education program (Management Committee). | PD | Complete | | | | | | | |